oyco
oy-23-01. 0-4-20 #3

ENTERED

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RAW SEQUENCE LISTING              DATE: 03/30/2001
PATENT APPLICATION:  US/09/803,589    TIME: 12:29:59

        Input Set : A:\07334-325001.TXT
        Output Set: N:\CRF3\03302001\I803589.raw
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    4 <110> APPLICANT: McCarthy, Sean A.
    5         Holtzman, Douglas A.
    6         Goodearl, Andrew D.J.
    8 <120> TITLE OF INVENTION: NOVEL GENES ENCODING PROTEINS HAVING
    9        PROGNOSTIC, DIAGNOSTIC, PREVENTIVE, THERAPEUTIC AND OTHER
   10        USES
   12 <130> FILE REFERENCE: 07334-325001
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C--> 14 <141> CURRENT FILING DATE: 2001-03-09
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   15 <151> PRIOR FILING DATE: 1998-08-04
   17 <150> PRIOR APPLICATION NUMBER: US 60/054,645
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   20 <150> PRIOR APPLICATION NUMBER: US 09/130,491
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   26 <150> PRIOR APPLICATION NUMBER: US 60/058,108
   27 <151> PRIOR FILING DATE: 1997-09-05
   29 <150> PRIOR APPLICATION NUMBER: US 09/388,280
   30 <151> PRIOR FILING DATE: 1999-09-01
   32 <150> PRIOR APPLICATION NUMBER: US 09/388,279
   33 <151> PRIOR FILING DATE: 1999-09-01
   35 <160> NUMBER OF SEQ ID NOS: 14
   37 <170> SOFTWARE: FastSEQ for Windows Version 4.0
   39 <210> SEQ ID NO: 1
   40 <211> LENGTH: 3147
   41 <212> TYPE: DNA
   42 <213> ORGANISM: Homo sapiens
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   45 <221> NAME/KEY: CDS
   46 <222> LOCATION: (3)...(1826)
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   50    Thr Arg Pro Ile Leu Val Ile His Asp Glu Gln Lys Gly Pro Glu
   51     1               5                  10                  15
   53 gtg acc tcc aat gct gcc ctc act ctg cgg aac ttt tgc aac tgg cag      95
   54 Val Thr Ser Asn Ala Ala Leu Thr Leu Arg Asn Phe Cys Asn Trp Gln
   55                    20                  25                  30
   57 aag cag cac aac cca ccc agt gac cgg gat gca gag cac tat gac aca     143
   58 Lys Gln His Asn Pro Pro Ser Asp Arg Asp Ala Glu His Tyr Asp Thr
   59               35                  40                  45
   61 gca att ctt ttc acc aga cag gac ttg tgt ggg tcc cag aca tgt gat     191
   62 Ala Ile Leu Phe Thr Arg Gln Asp Leu Cys Gly Ser Gln Thr Cys Asp
   63            50                  55                  60
   65 act ctt ggg atg gct gat gtt gga act gtg tgt gat ccg agc aga agc     239
   66 Thr Leu Gly Met Ala Asp Val Gly Thr Val Cys Asp Pro Ser Arg Ser
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Input Set : A:\07334-325001.TXT
Output Set: N:\CRF3\03302001\I803589.raw

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67      65              70              75
69 tgc tcc gtc ata gaa gat gat ggt tta caa gct gcc ttc acc aca gcc    287
70 Cys Ser Val Ile Glu Asp Asp Gly Leu Gln Ala Ala Phe Thr Thr Ala
71 80              85              90              95
73 cat gaa tta ggc cac gtg ttt aac atg cca cat gat gat gca aag cag    335
74 His Glu Leu Gly His Val Phe Asn Met Pro His Asp Asp Ala Lys Gln
75              100             105             110
77 tgt gcc agc ctt aat ggt gtg aac cag gat tcc cac atg atg gcg tca    383
78 Cys Ala Ser Leu Asn Gly Val Asn Gln Asp Ser His Met Met Ala Ser
79          115             120             125
81 atg ctt tcc aac ctg gac cac agc cag cct tgg tct cct tgc agt gcc    431
82 Met Leu Ser Asn Leu Asp His Ser Gln Pro Trp Ser Pro Cys Ser Ala
83          130             135             140
85 tac atg att aca tca ttt ctg gat aat ggt cat ggg gaa tgt ttg atg    479
86 Tyr Met Ile Thr Ser Phe Leu Asp Asn Gly His Gly Glu Cys Leu Met
87      145             150             155
89 gac aag cct cag aat ccc ata cag ctc cca ggc gat ctc cct ggc acc    527
90 Asp Lys Pro Gln Asn Pro Ile Gln Leu Pro Gly Asp Leu Pro Gly Thr
91 160             165             170             175
93 tcg tac gat gcc aac cgg cag tgc cag ttt aca ttt ggg gag gac tcc    575
94 Ser Tyr Asp Ala Asn Arg Gln Cys Gln Phe Thr Phe Gly Glu Asp Ser
95              180             185             190
97 aaa cac tgc ccc gat gca gcc agc aca tgt agc acc ttg tgg tgt acc    623
98 Lys His Cys Pro Asp Ala Ala Ser Thr Cys Ser Thr Leu Trp Cys Thr
99          195             200             205
101 ggc acc tct ggt ggg gtg ctg gtg tgt caa acc aaa cac ttc ccg tgg   671
102 Gly Thr Ser Gly Gly Val Leu Val Cys Gln Thr Lys His Phe Pro Trp
103         210             215             220
105 gcg gat ggc acc agc tgt gga gaa ggg aaa tgg tgt atc aac ggc aag   719
106 Ala Asp Gly Thr Ser Cys Gly Glu Gly Lys Trp Cys Ile Asn Gly Lys
107     225             230             235
109 tgt gtg aac aaa acc gac aga aag cat ttt gat acg cct ttt cat gga   767
110 Cys Val Asn Lys Thr Asp Arg Lys His Phe Asp Thr Pro Phe His Gly
111 240             245             250             255
113 agc tgg gga atg tgg ggg cct tgg gga gac tgt tcg aga acg tgc ggt   815
114 Ser Trp Gly Met Trp Gly Pro Trp Gly Asp Cys Ser Arg Thr Cys Gly
115             260             265             270
117 gga gga gtc cag tac acg atg agg gaa tgt gac aac cca gtc cca aag   863
118 Gly Gly Val Gln Tyr Thr Met Arg Glu Cys Asp Asn Pro Val Pro Lys
119             275             280             285
121 aat gga ggg aag tac tgt gaa ggc aaa cga gtg cgc tac aga tcc tgt   911
122 Asn Gly Gly Lys Tyr Cys Glu Gly Lys Arg Val Arg Tyr Arg Ser Cys
123     290             295             300
125 aac ctt gag gac tgt cca gac aat aat gga aaa acc ttt aga gag gaa   959
126 Asn Leu Glu Asp Cys Pro Asp Asn Asn Gly Lys Thr Phe Arg Glu Glu
127     305             310             315
129 caa tgt gaa gca cac aac gag ttt tca aaa gct tcc ttt ggg agt ggg   1007
130 Gln Cys Glu Ala His Asn Glu Phe Ser Lys Ala Ser Phe Gly Ser Gly
131 320             325             330             335
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Input Set : A:\07334-325001.TXT
Output Set: N:\CRF3\03302001\I803589.raw

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133 cct gcg gtg gaa tgg att ccc aag tac gct ggc gtc tca cca aag gac     1055
134 Pro Ala Val Glu Trp Ile Pro Lys Tyr Ala Gly Val Ser Pro Lys Asp
135             340             345             350
137 agg tgc aag ctc atc tgc caa gcc aaa ggc att ggc tac ttc ttc gtt     1103
138 Arg Cys Lys Leu Ile Cys Gln Ala Lys Gly Ile Gly Tyr Phe Phe Val
139             355             360             365
141 ttg cag ccc aag gtt gta gat ggt act cca tgt agc cca gat tcc acc     1151
142 Leu Gln Pro Lys Val Val Asp Gly Thr Pro Cys Ser Pro Asp Ser Thr
143             370             375             380
145 tct gtc tgt gtg caa gga cag tgt gta aaa gct ggt tgt gat cgc atc     1199
146 Ser Val Cys Val Gln Gly Gln Cys Val Lys Ala Gly Cys Asp Arg Ile
147     385             390             395
149 ata gac tcc aaa aag aag ttt gat aaa tgt ggt gtt tgc ggg gga aat     1247
150 Ile Asp Ser Lys Lys Lys Phe Asp Lys Cys Gly Val Cys Gly Gly Asn
151 400             405             410             415
153 gga tct act tgt aaa aaa ata tca gga tca gtt act agt gca aaa cct     1295
154 Gly Ser Thr Cys Lys Lys Ile Ser Gly Ser Val Thr Ser Ala Lys Pro
155             420             425             430
157 gga tat cat gat atc atc aca att cca act gga gcc acc aac atc gaa     1343
158 Gly Tyr His Asp Ile Ile Thr Ile Pro Thr Gly Ala Thr Asn Ile Glu
159             435             440             445
161 gtg aaa cag cgg aac cag agg gga tcc agg aac aat ggc agc ttt ctt     1391
162 Val Lys Gln Arg Asn Gln Arg Gly Ser Arg Asn Asn Gly Ser Phe Leu
163         450             455             460
165 gcc atc aaa gct gct gat ggc aca tat att ctt aat ggt gac tac act     1439
166 Ala Ile Lys Ala Ala Asp Gly Thr Tyr Ile Leu Asn Gly Asp Tyr Thr
167     465             470             475
169 ttg tcc acc tta gag caa gac att atg tac aaa ggt gtt gtc ttg agg     1487
170 Leu Ser Thr Leu Glu Gln Asp Ile Met Tyr Lys Gly Val Val Leu Arg
171 480             485             490             495
173 tac agc ggc tcc tct gcg gca ttg gaa aga att cgc agc ttt agc cct     1535
174 Tyr Ser Gly Ser Ser Ala Ala Leu Glu Arg Ile Arg Ser Phe Ser Pro
175             500             505             510
177 ctc aaa gag ccc ttg acc atc cag gtt ctt act gtg ggc aat gcc ctt     1583
178 Leu Lys Glu Pro Leu Thr Ile Gln Val Leu Thr Val Gly Asn Ala Leu
179             515             520             525
181 cga cct aaa att aaa tac acc tac ttc gta aag aag aag aag gaa tct     1631
182 Arg Pro Lys Ile Lys Tyr Thr Tyr Phe Val Lys Lys Lys Lys Glu Ser
183             530             535             540
185 ttc aat gct atc ccc act ttt tca gca tgg gtc att gaa gag tgg ggc     1679
186 Phe Asn Ala Ile Pro Thr Phe Ser Ala Trp Val Ile Glu Glu Trp Gly
187     545             550             555
189 gaa tgt tct aag acc tgt ggg aag ggt tac aaa aaa aga agc ttg aag     1727
190 Glu Cys Ser Lys Thr Cys Gly Lys Gly Tyr Lys Lys Arg Ser Leu Lys
191 560             565             570             575
193 tgt ctg tcc cat gat gga ggg gtg tta tct cat gag agc tgt gat cct     1775
194 Cys Leu Ser His Asp Gly Gly Val Leu Ser His Glu Ser Cys Asp Pro
195             580             585             590
197 tta aag aaa cct aaa cat ttc ata gac ttt tgc aca atg gca gaa tgc     1823
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Input Set : A:\07334-325001.TXT
Output Set: N:\CRF3\03302001\I803589.raw

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198 Leu Lys Lys Pro Lys His Phe Ile Asp Phe Cys Thr Met Ala Glu Cys
199              595           600            605
201 agt taagtggttt aagtggtgtt agctttgagg gcaaggcaaa gtgaggaagg        1876
202 Ser  ..
204 gctggtgcag ggaaagcaag aaggctggag ggatccagcg tatcttgcca gtaaccagtg  1936
205 aggtgtatca gtaaggtggg attatggggg tagatagaaa aggagttgaa tcatcagagt  1996
206 aaactgccag ttgcaaattt gataggatag ttagtgagga ttattaacct ctgagcagtg  2056
207 atatagcata ataaagcccc gggcattatt attattattt cttttgttac atctattaca  2116
208 agtttagaaa aaacaaagca attgtcaaaa aaagttagaa ctattacaac ccctgtttcc  2176
209 tggtacttat caaatactta gtatcatggg ggttgggaaa tgaaaagtag gagaaaagtg  2236
210 agattttact aagacctgtt ttactttacc tcactaacaa tggggggaga aaggagtaca  2296
211 aataggatct ttgaccagca ctgtttatgg ctgctgtggt ttcagagaat gtttatacat  2356
212 tatttctacc gagaattaaa acttcagatt gttcaacatg agagaaaggc tcagcaacgt  2416
213 gaaataacgc aaatggcttc ctctttcctt ttttggacca tctcagtctt tatttgtgta  2476
214 attcattttg aggaaaaaac aactccatgt atttattcaa gtgcattaaa gtctacaatg  2536
215 gaaaaaaagc agtgaagcat tacatgctgg taaaagctag aggagacaca atgagcttag  2596
216 tacctccaac ttcctttctt tcctaccatg taaccctgct ttcggaatat ggatgtaaag  2656
217 aagtaacttg tgtctcatga aaatcagtac aatcacacaa ggaggatgaa acgccggaac  2716
218 aaaaatgagg tgtgtagaac agggtcccac aggtttgggg acattgagat cacttgtctt  2776
219 gtggtgggga ggctgctgag gggtagcagg tccatctcca gcagctggtc caacagtcgt  2836
220 atcctggtga atgtctgttc agctcttctg tgagaatatg attttttcca tatgtatata  2896
221 gtaaaatatg ttactataaa ttacatgtac tttataagta ttggtttggg tgttccttcc  2956
222 aagaaggact atagttagta ataaatgcct ataataacat atttattttt atacatttat  3016
223 ttctaatgaa aaaaactttt aaattatatc gcttttgtgg aagtgcatat aaaatagagt  3076
224 atttatacaa tatatgttac tagaaataaa agaacacttt tggaaaaaaa aaaaaaaaaa  3136
225 agggcggccg c                                                       3147
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228 <211> LENGTH: 608
229 <212> TYPE: PRT
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232 <400> SEQUENCE: 2
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236          20              25              30
237 Gln His Asn Pro Pro Ser Asp Arg Asp Ala Glu His Tyr Asp Thr Ala
238          35              40              45
239 Ile Leu Phe Thr Arg Gln Asp Leu Cys Gly Ser Gln Thr Cys Asp Thr
240      50              55              60
241 Leu Gly Met Ala Asp Val Gly Thr Val Cys Asp Pro Ser Arg Ser Cys
242 65              70              75              80
243 Ser Val Ile Glu Asp Asp Gly Leu Gln Ala Ala Phe Thr Thr Ala His
244              85              90              95
245 Glu Leu Gly His Val Phe Asn Met Pro His Asp Asp Ala Lys Gln Cys
246          100             105             110
247 Ala Ser Leu Asn Gly Val Asn Gln Asp Ser His Met Met Ala Ser Met
248          115             120             125
249 Leu Ser Asn Leu Asp His Ser Gln Pro Trp Ser Pro Cys Ser Ala Tyr
250      130             135             140
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Input Set : A:\07334-325001.TXT
Output Set: N:\CRF3\03302001\I803589.raw

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251 Met Ile Thr Ser Phe Leu Asp Asn Gly His Gly Glu Cys Leu Met Asp
252 145                 150                 155                 160
253 Lys Pro Gln Asn Pro Ile Gln Leu Pro Gly Asp Leu Pro Gly Thr Ser
254             165                 170                 175
255 Tyr Asp Ala Asn Arg Gln Cys Gln Phe Thr Phe Gly Glu Asp Ser Lys
256             180                 185                 190
257 His Cys Pro Asp Ala Ala Ser Thr Cys Ser Thr Leu Trp Cys Thr Gly
258         195                 200                 205
259 Thr Ser Gly Gly Val Leu Val Cys Gln Thr Lys His Phe Pro Trp Ala
260     210                 215                 220
261 Asp Gly Thr Ser Cys Gly Glu Gly Lys Trp Cys Ile Asn Gly Lys Cys
262 225                 230                 235                 240
263 Val Asn Lys Thr Asp Arg Lys His Phe Asp Thr Pro Phe His Gly Ser
264             245                 250                 255
265 Trp Gly Met Trp Gly Pro Trp Gly Asp Cys Ser Arg Thr Cys Gly Gly
266             260                 265                 270
267 Gly Val Gln Tyr Thr Met Arg Glu Cys Asp Asn Pro Val Pro Lys Asn
268         275                 280                 285
269 Gly Gly Lys Tyr Cys Glu Gly Lys Arg Val Arg Tyr Arg Ser Cys Asn
270     290                 295                 300
271 Leu Glu Asp Cys Pro Asp Asn Asn Gly Lys Thr Phe Arg Glu Glu Gln
272 305                 310                 315                 320
273 Cys Glu Ala His Asn Glu Phe Ser Lys Ala Ser Phe Gly Ser Gly Pro
274             325                 330                 335
275 Ala Val Glu Trp Ile Pro Lys Tyr Ala Gly Val Ser Pro Lys Asp Arg
276             340                 345                 350
277 Cys Lys Leu Ile Cys Gln Ala Lys Gly Ile Gly Tyr Phe Phe Val Leu
278         355                 360                 365
279 Gln Pro Lys Val Val Asp Gly Thr Pro Cys Ser Pro Asp Ser Thr Ser
280     370                 375                 380
281 Val Cys Val Gln Gly Gln Cys Val Lys Ala Gly Cys Asp Arg Ile Ile
282 385                 390                 395                 400
283 Asp Ser Lys Lys Lys Phe Asp Lys Cys Gly Val Cys Gly Gly Asn Gly
284             405                 410                 415
285 Ser Thr Cys Lys Lys Ile Ser Gly Ser Val Thr Ser Ala Lys Pro Gly
286         420                 425                 430
287 Tyr His Asp Ile Ile Thr Ile Pro Thr Gly Ala Thr Asn Ile Glu Val
288         435                 440                 445
289 Lys Gln Arg Asn Gln Arg Gly Ser Arg Asn Asn Gly Ser Phe Leu Ala
290     450                 455                 460
291 Ile Lys Ala Ala Asp Gly Thr Tyr Ile Leu Asn Gly Asp Tyr Thr Leu
292 465                 470                 475                 480
293 Ser Thr Leu Glu Gln Asp Ile Met Tyr Lys Gly Val Val Leu Arg Tyr
294             485                 490                 495
295 Ser Gly Ser Ser Ala Ala Leu Glu Arg Ile Arg Ser Phe Ser Pro Leu
296         500                 505                 510
297 Lys Glu Pro Leu Thr Ile Gln Val Leu Thr Val Gly Asn Ala Leu Arg
298         515                 520                 525
299 Pro Lys Ile Lys Tyr Thr Tyr Phe Val Lys Lys Lys Lys Glu Ser Phe
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VERIFICATION SUMMARY   DATE: 03/30/2001
PATENT APPLICATION: US/09/803,589   TIME: 12:30:00

    Input Set : A:\07334-325001.TXT
    Output Set: N:\CRF3\03302001\I803589.raw

L:14 M:270 C: Current Application Number differs, Replaced Current Application No
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date